

Claims:

- 5 1. An access network adapted to communicate with a mobile terminal and a
core network portion (20) of a mobile telecommunications network, said
access network comprising:
a plurality of local base stations (301) each defining a mini-cell and
adapted to communicate with mobile terminals (1) located in a respective
10 mini-cell over an unlicensed-radio interface (31);
an access network controller (303) adapted to communicate with said core
network portion over a predetermined licensed mobile network interface
and connected to said plurality of local base stations (301);
characterised in that
15 all said mini-cells are assigned a common identifier associated with said
access network controller.
- 20 2. An access network as claimed in claim 1, characterised in that said core
network is adapted to address a handover request containing said common
identifier to said access network controller (303).
- 25 3. An access network as claimed in claim 1 or 2, characterised in that said
access network controller (303) is adapted to respond to a handover request
from said core network (20) by assigning a handover reference to said
request and to setup a communication path between a mobile station and
said core network when a message containing said handover reference is
received from said mobile station.
4. An access network as claimed in any previous claim, characterised in that

said local base stations are adapted to communicate said common identifier to said mobile terminal.

5 5. An access network as claimed in any previous claim, characterised in that said common identifier identifies a single cell address.

6. An access network as claimed in any previous claim, characterised in that said common identifier identifies a channel frequency utilised by said local base stations.

10 7. An access network as claimed in any previous claim, characterised in that said common identifier identifies a base station address common to all local base stations.

15 8. An access network as claimed in any previous claim, characterised in that said common identifier is known to said core network.

9. An access network as claimed in any previous claim, further characterised by a fixed broadband network (302) connecting said plurality of local base stations (301) with said access network controller (303).

20 10. A mobile telecommunications network including a core network portion (20), at least one first access network (10), and at least one second access network portion (30), wherein said first and second access network portions are adapted to communicate with a mobile terminal (1) and said core network portion (20) said at least one second access network comprising:
25 a plurality of local base stations (301) each defining a mini-cell and adapted to communicate with mobile terminals (1) located in a respective mini-cell over an unlicensed-radio interface (31);
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an access network controller (303) adapted to communicate with said core network portion over a predetermined licensed mobile network interface and connected with said plurality of local base stations (301), characterised in that

5 all said mini-cells are assigned a common identifier associated with said access network controller.

11. A network as claimed in claim 10, characterised in that said at least one first access network (10) is adapted to address a handover request
10 containing said common identifier via said core network (20) to said access network controller (303).

12. A network as claimed in claim 10 or 11, characterised in that said access network controller (303) is adapted to respond to a handover request from
15 said core network (20) by assigning a handover reference to said request and to setup a communication path between a mobile station and said core network when a message containing said handover reference is received from said mobile station.

20 13. A network as claimed in any one of claims 10 to 12, characterised in that said local base stations are adapted to broadcast said common identifier within an associated mini-cell.

14. A network as claimed in any one of claims 10 to 13, characterised in that
25 said common identifier identifies a single cell address.

15. An access network as claimed in any one of claims 10 to 14, characterised in that said common identifier identifies a channel frequency utilised by said local base stations.

16. An access network as claimed in any one of claims 10 to 15, characterised in that said common identifier identifies a base station address common to all local base stations.
- 5 17. A network as claimed in any one of claims 10 to 16, characterised in that said common identifier is known to said at least one first access network portion (10).
- 10 18. A network as claimed in any one of claims 10 to 17, characterised by a fixed broadband network (302) connecting said plurality of local base stations (301) with said access network controller (303).
- 15 19. A method for handing over communication with a mobile station from a cell of a public licensed mobile network to a mini-cell of an unlicensed-radio access network connected to said public mobile network, said public licensed mobile network comprising an access portion including a base station (10) defining said cell and a core network portion including a switching control part (202) connected to said base station, said unlicensed-radio access network (30) comprising a plurality of local base stations (301) each defining a mini-cell and adapted to communicate with a mobile station (1) via an unlicensed-radio interface and an access network controller (303) adapted to communicate with said local base stations and with the core network portion of said public mobile network, said method including:
- 20 allocating a common identifier to all local base stations connected to said access network controller,
- 25 each local base station communicating at least a part of said common identifier to a mobile station (1) located within the associated mini-cell via said unlicensed-radio interface,
- 30 said access network controller (303) responding to a handover request

message received from the core network portion by generating a handover reference and transmitting said handover reference as a handover acknowledgment message to said core network portion (10),
said access network controller (303) receiving said handover reference from
5 said mobile station via said local base station (301) and setting up a communication path over said fixed broadband network with said local base station in response to said received handover reference.

20. A method as claimed in claim 19 further characterised by the steps of:
10 said base station (10) of said public licensed mobile network receiving said common identifier from said mobile station, identifying said access network controller (303) using said common identifier and generating a handover request message addressed to said access network controller (303) via said switching control part (202).

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21. A method as claimed in claim 19 or 20, further characterised by the steps of: said mobile station (1) upon receipt of said common identifier transmitting a report to said base station (10) adapted to trigger handover irrespective of other frequencies received by said mobile station.

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